

Appl. No. 10/024,783
Final Amendment and/or Response
Reply to final Office action of 23 January 2006

Page 3 of 9

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) An electroluminescent device comprising:
 - a substrate;
 - an organic electroluminescent layer on the substrate;
 - a pattern-wise ink-jet printed electrode atop the electroluminescent layer on the substrate,
 - the electrode comprising a metal or a metal alloy having a melting point of 250°C or less that is includes a profile that is characteristic of having been ink-jet printed in a molten form, and being is at least 5 µm thick.
- 2-3. (Canceled)
4. (Previously presented) The electroluminescent device of claim 1, wherein the electrode is an electrode for supplying electrons to the electroluminescent layer.
5. (Original) The electroluminescent device of claim 4, wherein the electrode has a work function of 4.5 eV or less.
6. (Currently amended) An electroluminescent device comprising:
 - a substrate;
 - an organic electroluminescent layer on the substrate;
 - a pattern-wise ink-jet printed electrode atop the electroluminescent layer on the substrate,
 - the electrode comprising a metal or a metal alloy having a melting point of 250°C or less that is includes a profile that is characteristic of being ink-jet printed in a molten form and is at least 5 µm thick; and

Appl. No. 10/024,783
Final Amendment and/or Response
Reply to final Office action of 23 January 2006

Page 4 of 9

a relief pattern for patterning the pattern-wise ink-jet printed electrode.

7. (Previously presented) The electroluminescent device of claim 1, wherein:
the device is a matrix display device of the passive type including one or more electroluminescent layers sandwiched between row electrodes and column electrodes, and independently addressable electroluminescent elements being formed at crossings of row and column electrodes; and
the row electrodes are pattern-wise ink-jet printed electrodes comprising a metal or a metal alloy.

8. (Previously presented) A battery-operated and/or hand-held electronic device provided with the electroluminescent device of claim 1.

9. (Canceled)

10. (Previously presented) A method of manufacturing an electroluminescent device including a metal or metal alloy electrode provided in accordance with a desired pattern, comprising:

forming one or more layers of organic electroluminescent material on a surface; and

subsequently ink-jet printing molten metal or metal alloy in accordance with the desired pattern such that, upon cooling of the molten metal or metal alloy, the metal or metal alloy electrode is formed atop the one or more layers of organic electroluminescent material.

11. (Previously presented) The method of claim 10, further comprising
forming a relief pattern on the surface to facilitate patterning the pattern-wise ink-jet printed electrode.

12. (Canceled).

Appl. No. 10/024,783
Final Amendment and/or Response
Reply to final Office action of 23 January 2006

Page 5 of 9

13. (Previously presented) The method of claim 10, wherein
the metal or metal alloy has a melting point of 250 °C or less.
14. (Previously presented) The electroluminescent device of claim 1, wherein
the electrode has a work function of 4.5 eV or less.
- 15-16. (Canceled)
17. (Previously presented) The electroluminescent device of claim 6, wherein:
the device is a matrix display device of the passive type including one or more
electroluminescent layers sandwiched between row electrodes and column
electrodes, and independently addressable electroluminescent elements formed at
crossings of row and column electrodes; and
the row electrodes include the pattern-wise ink-jet printed electrode.
- 18-20. (Canceled)
21. (Previously presented) The method of claim 11, wherein forming the relief pattern
includes patterning of a photoresist material.
22. (Previously presented) The method of claim 10, wherein the metal or metal alloy
has a melting point between 60 °C and 150 °C.
23. (Previously presented) The method of claim 10, further including ink-jet printing a
selection layer to facilitate selective depositing of the metal or metal alloy.
24. (Previously presented) The method of claim 23, wherein the selection layer is
printed using an other pattern that is complementary to the desired pattern.

Appl. No. 10/024,783
Final Amendment and/or Response
Reply to final Office action of 23 January 2006

Page 6 of 9

25. (Previously presented) The method of claim 24, wherein the selection layer comprises a photoresist layer.

26. (Previously presented) A method of manufacturing an electroluminescent device including a metal or metal alloy electrode provided in accordance with a desired pattern, comprising:

ink-jet printing a selection layer on the surface to facilitate selective depositing of the metal or metal alloy upon the surface; and

applying the metal or metal alloy upon the surface in accordance with the desired pattern.

27. (Previously presented) The method of claim 26, wherein the selection layer is printed on the surface using an other pattern that is complementary to the desired pattern.

28. (Previously presented) The method of claim 27, wherein the selection layer comprises a photoresist layer.